

REPLACEMENT SHEET

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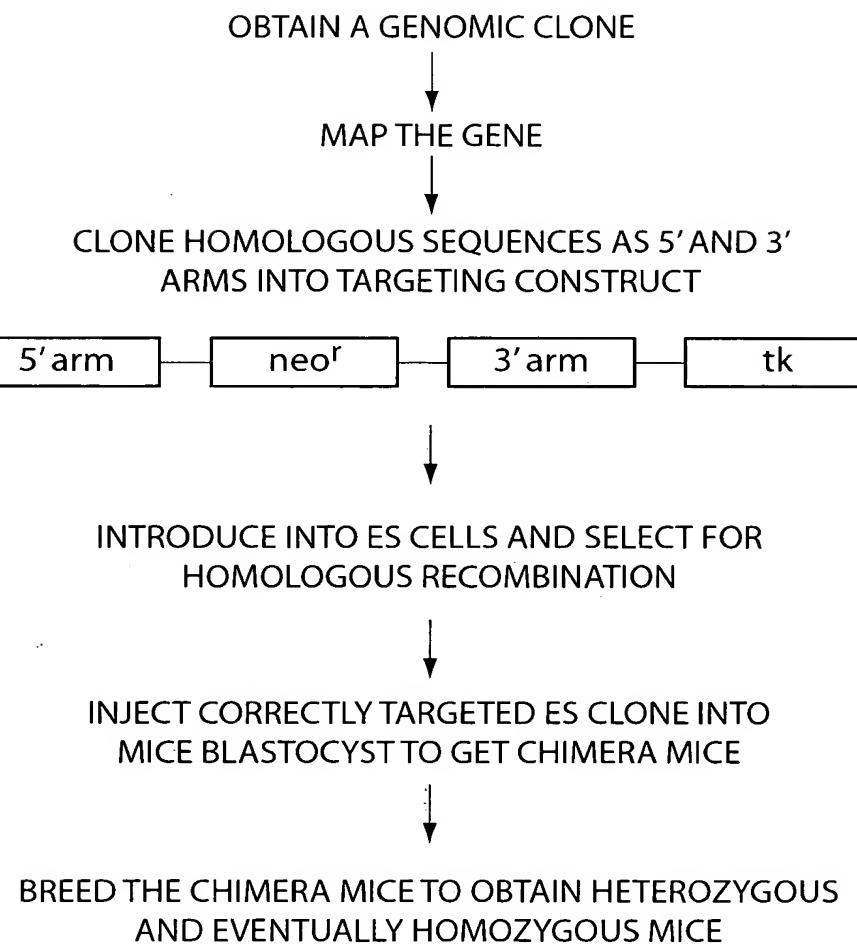


Fig. 1A

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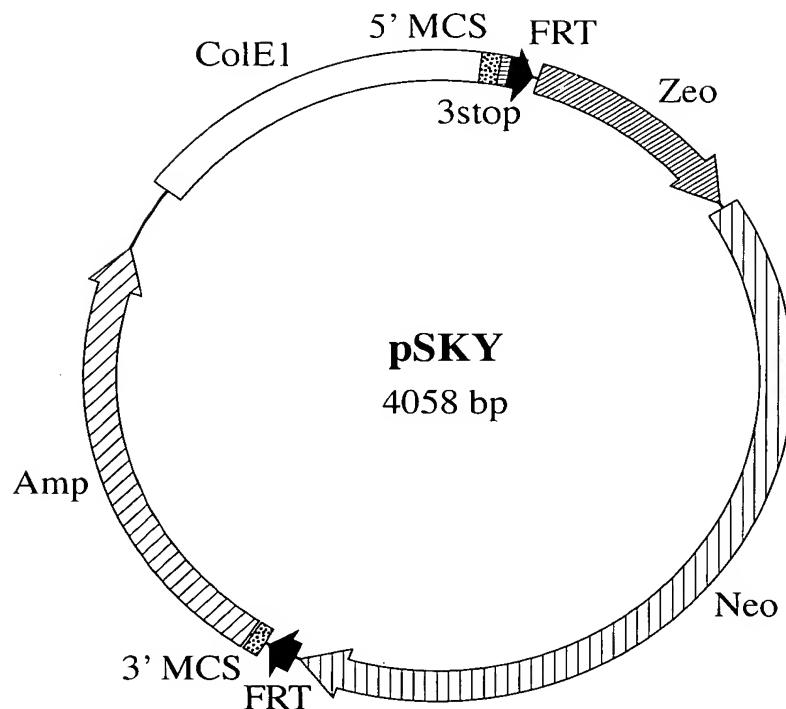


Fig. 1B

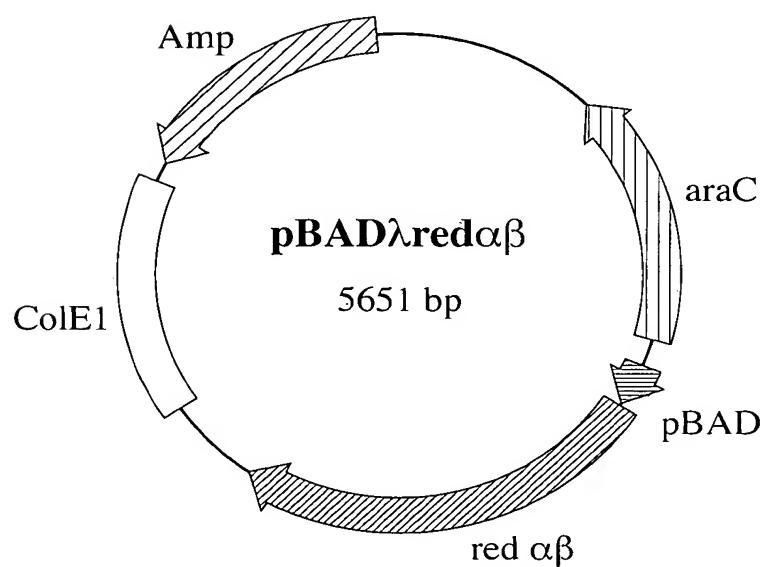


Fig. 1C

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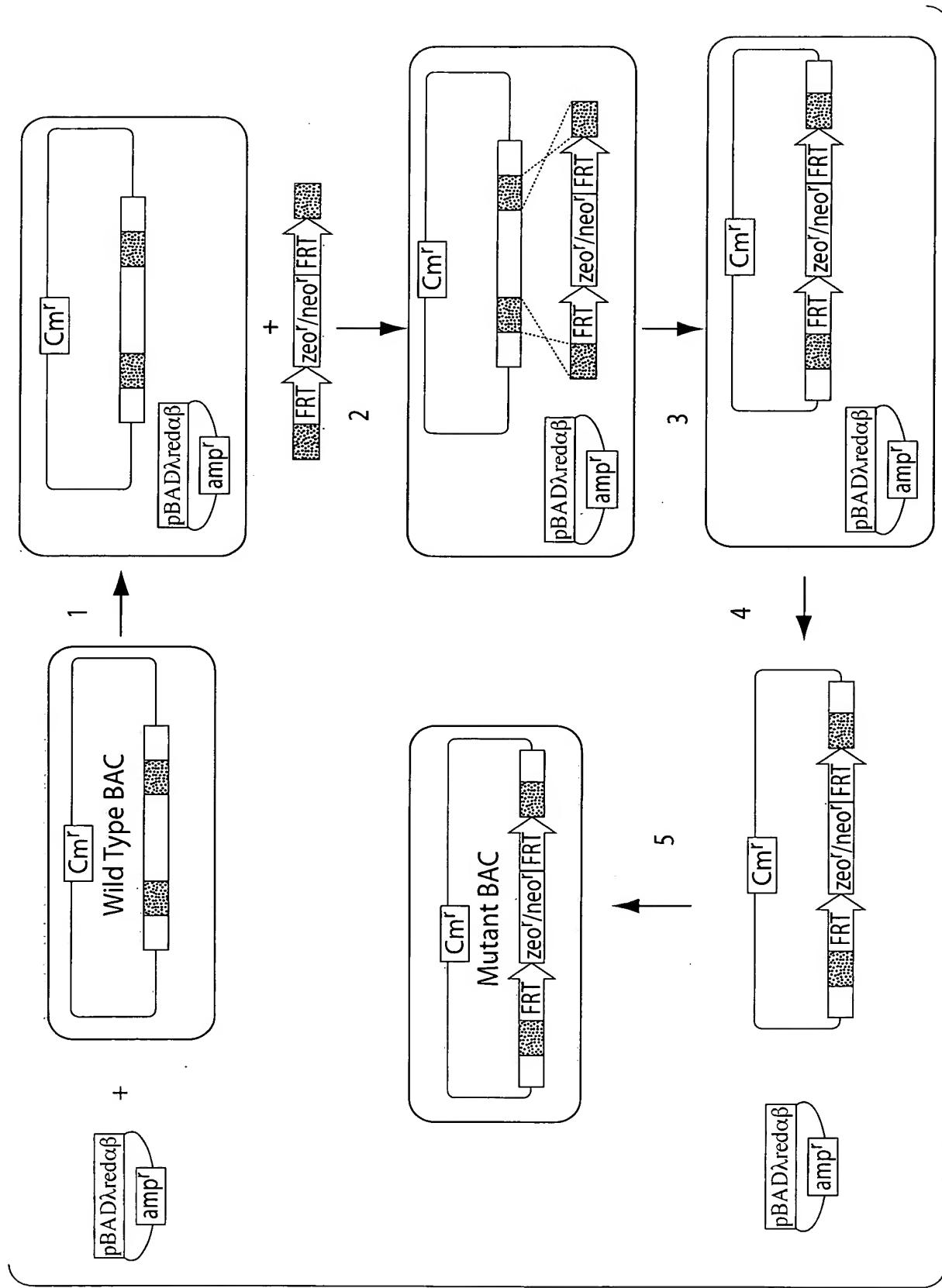


Fig. 1D

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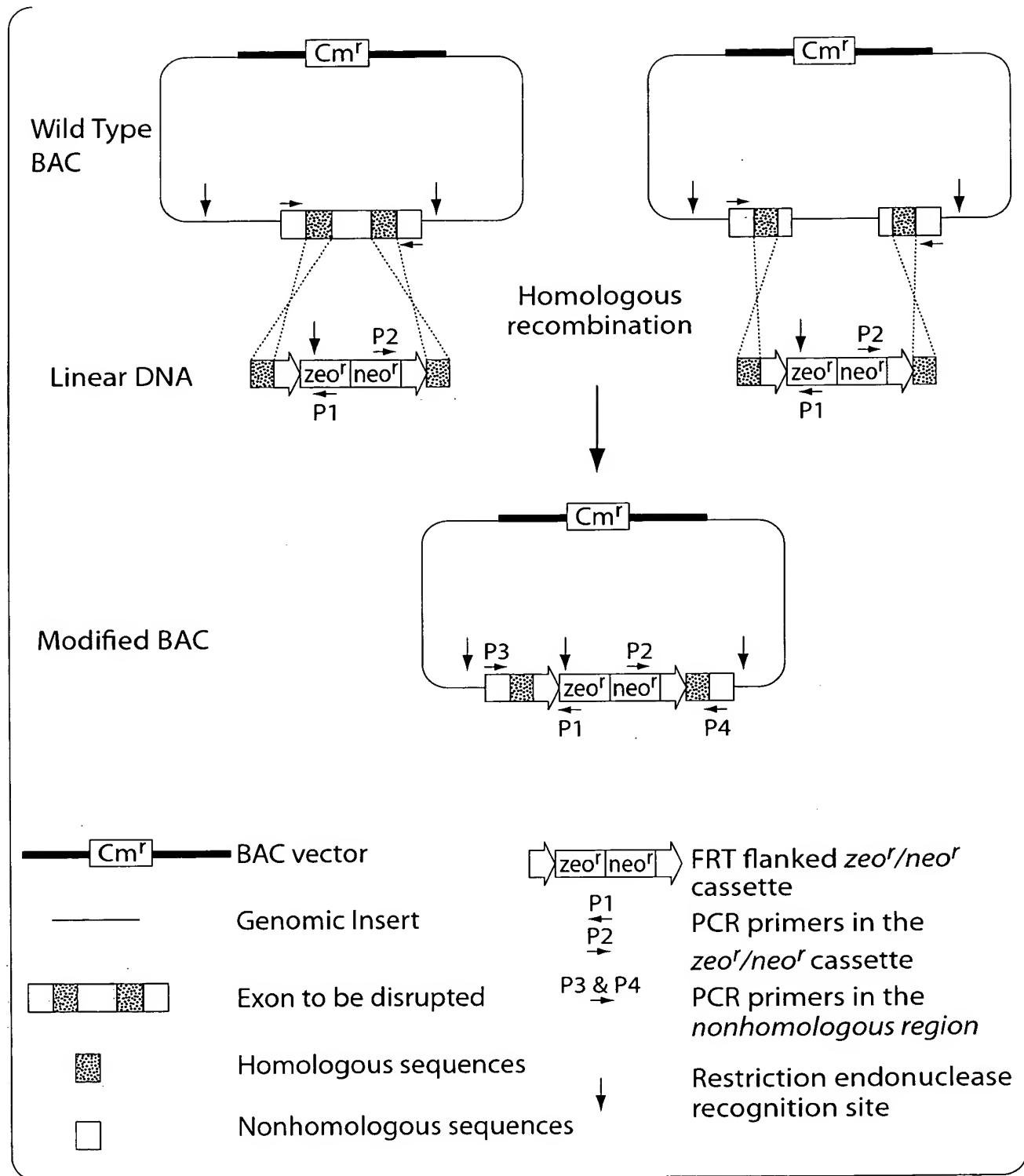


Fig. 1E

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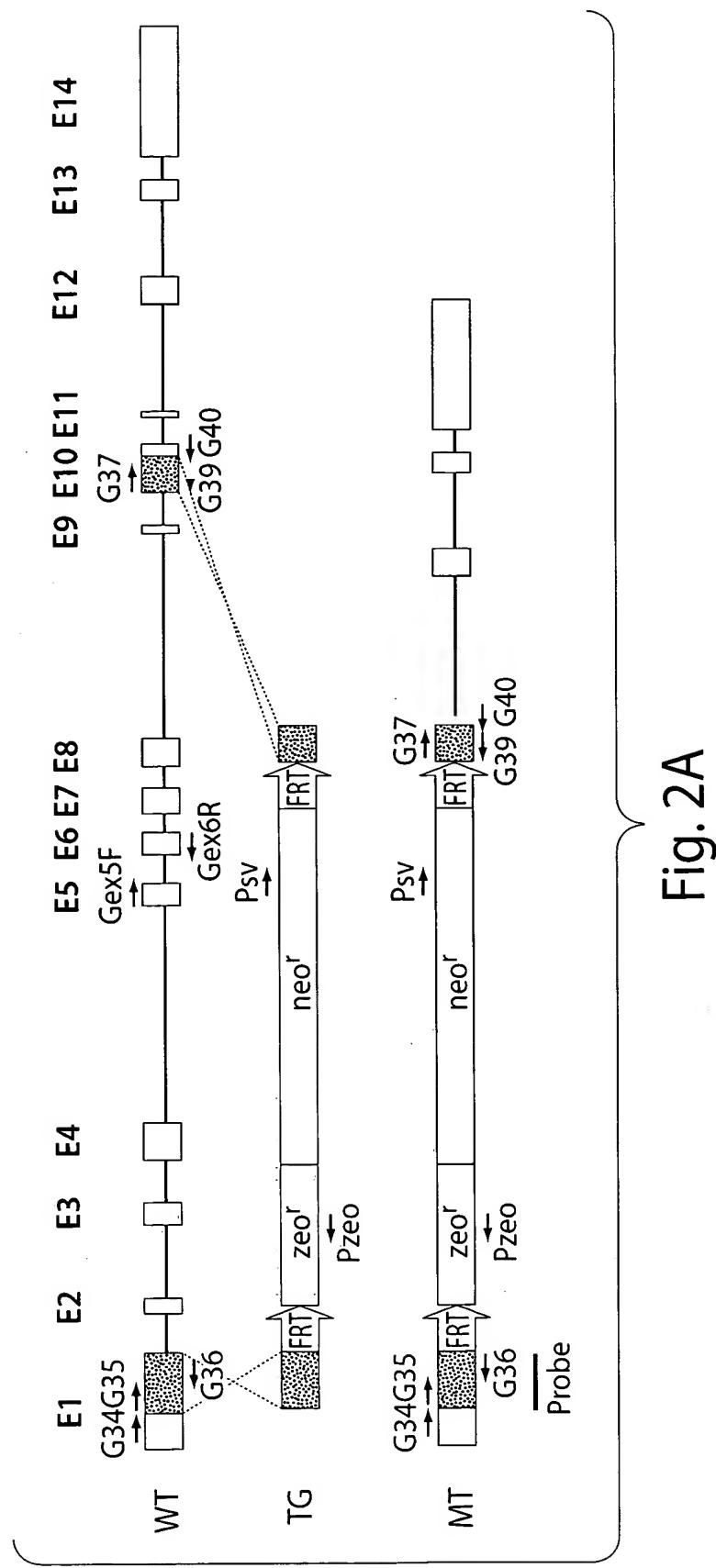
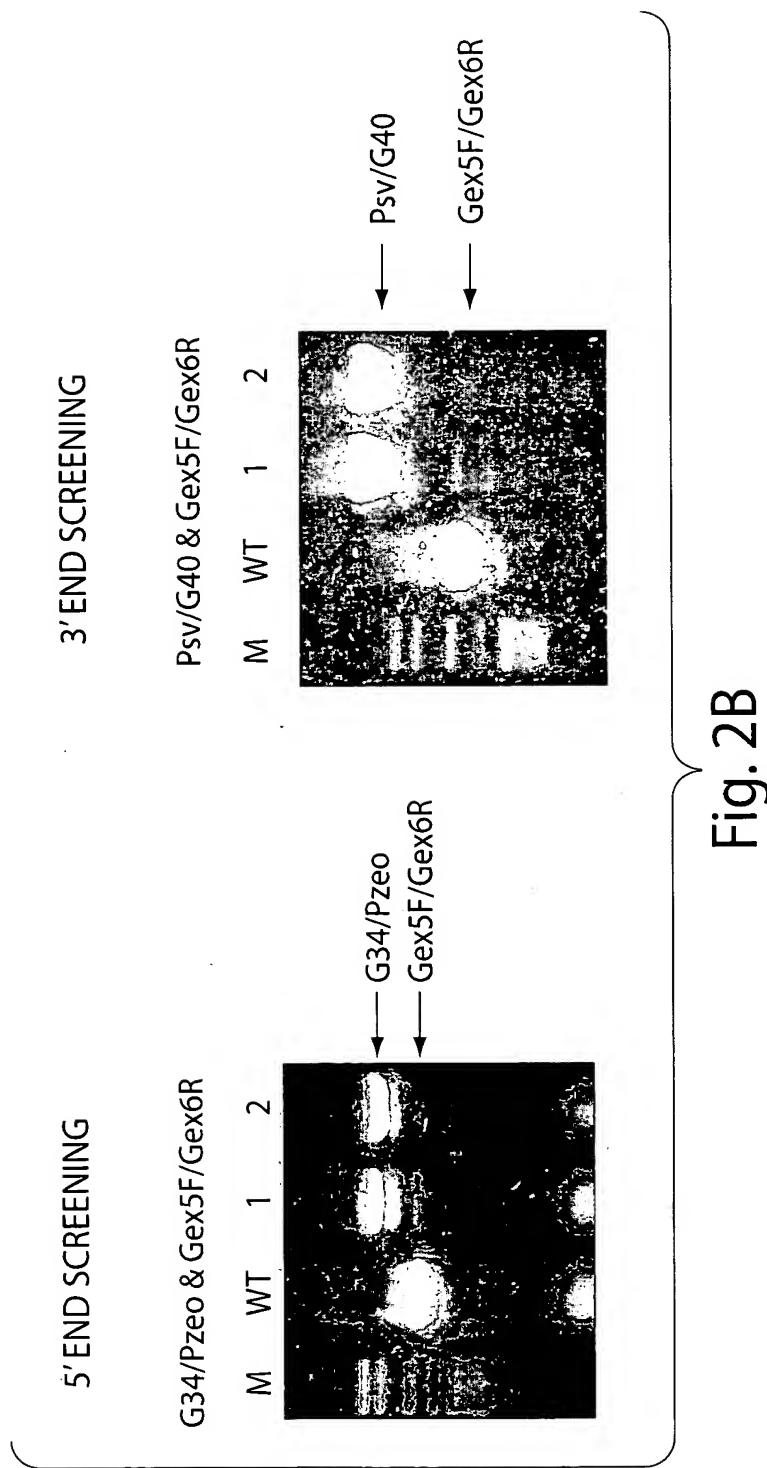


Fig. 2A

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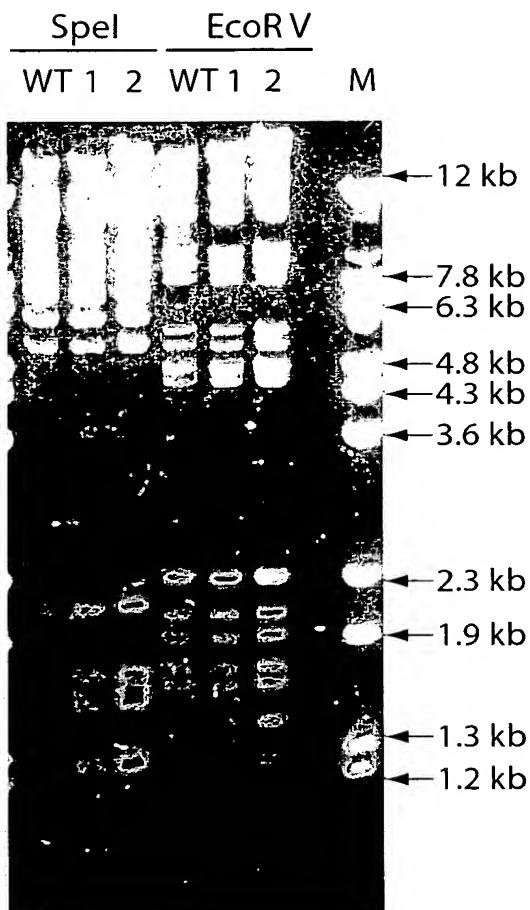


Fig. 2C

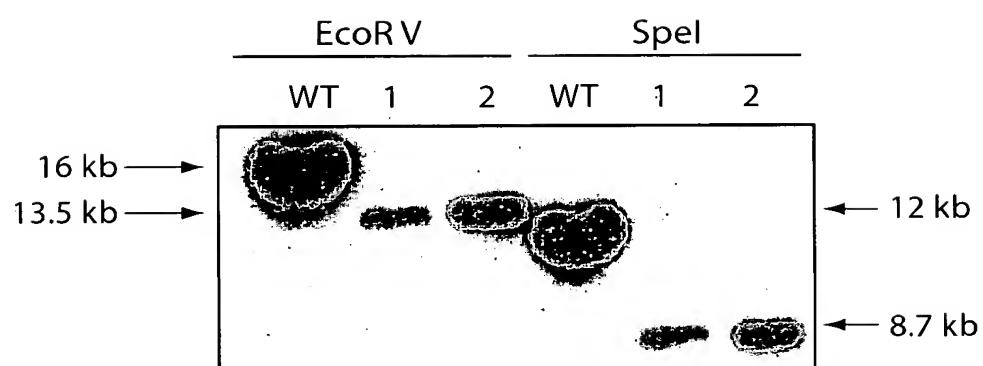


Fig. 2D

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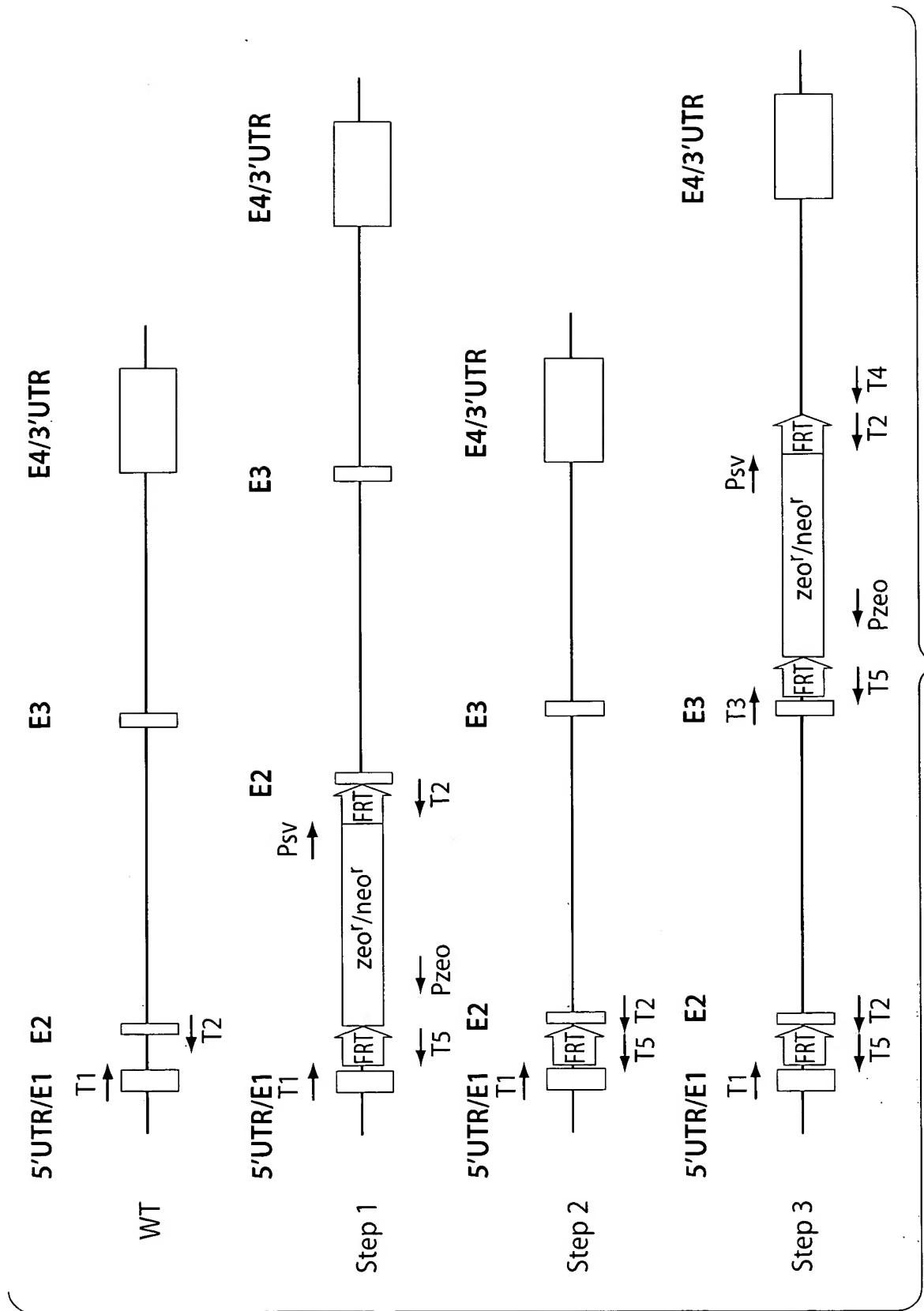


Fig. 3A

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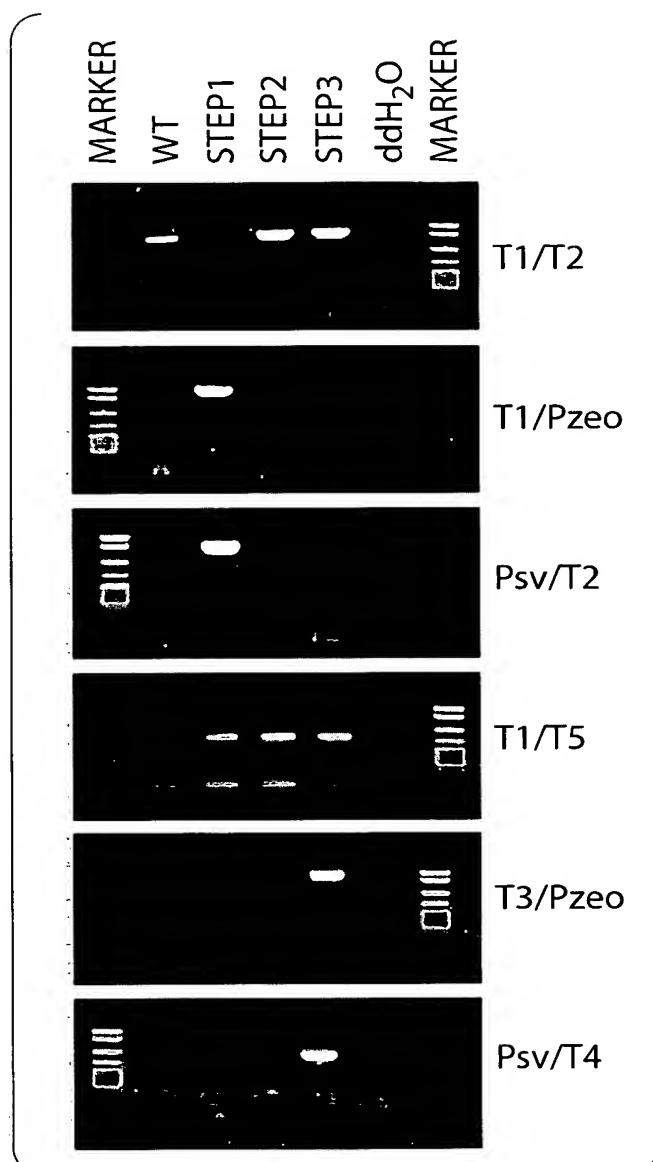
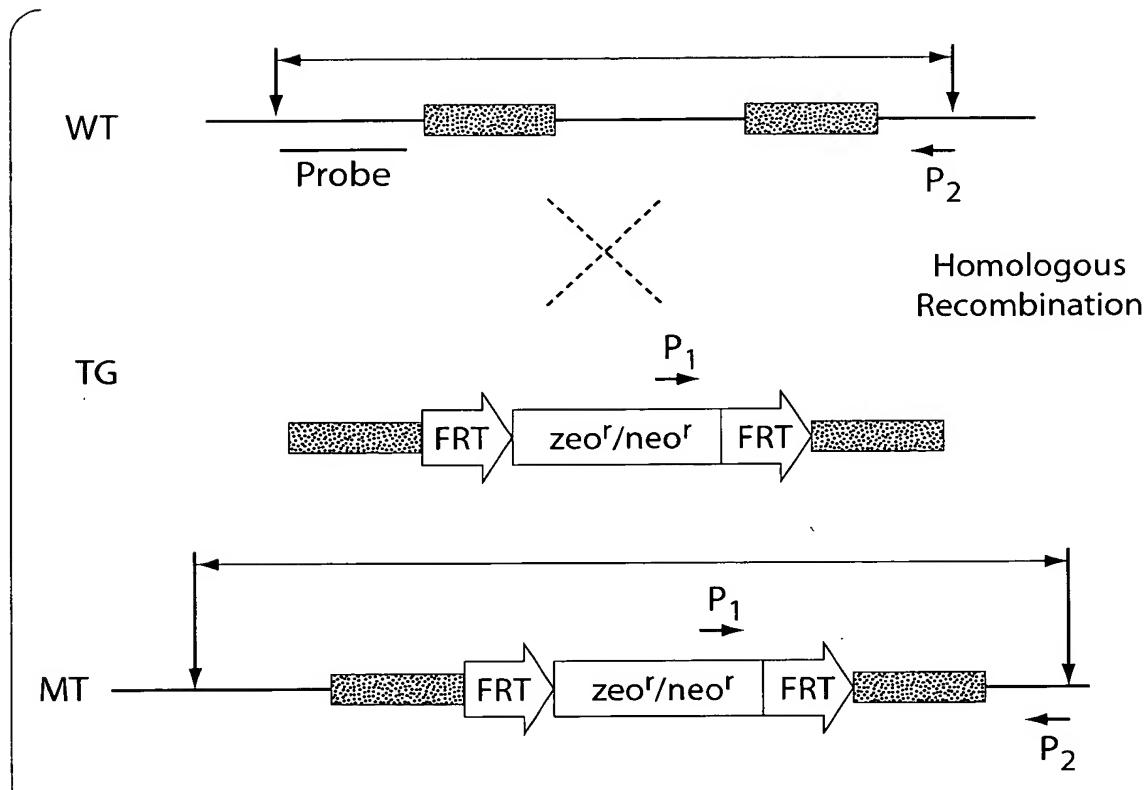


Fig. 3B

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## ASSAY

## RESULTS

Genomic PCR  
w/  $P_1/P_2$

— MT  
— WT

Random  
Insertion

Genomic PCR  
w/  $P_1/P_2$

No Product

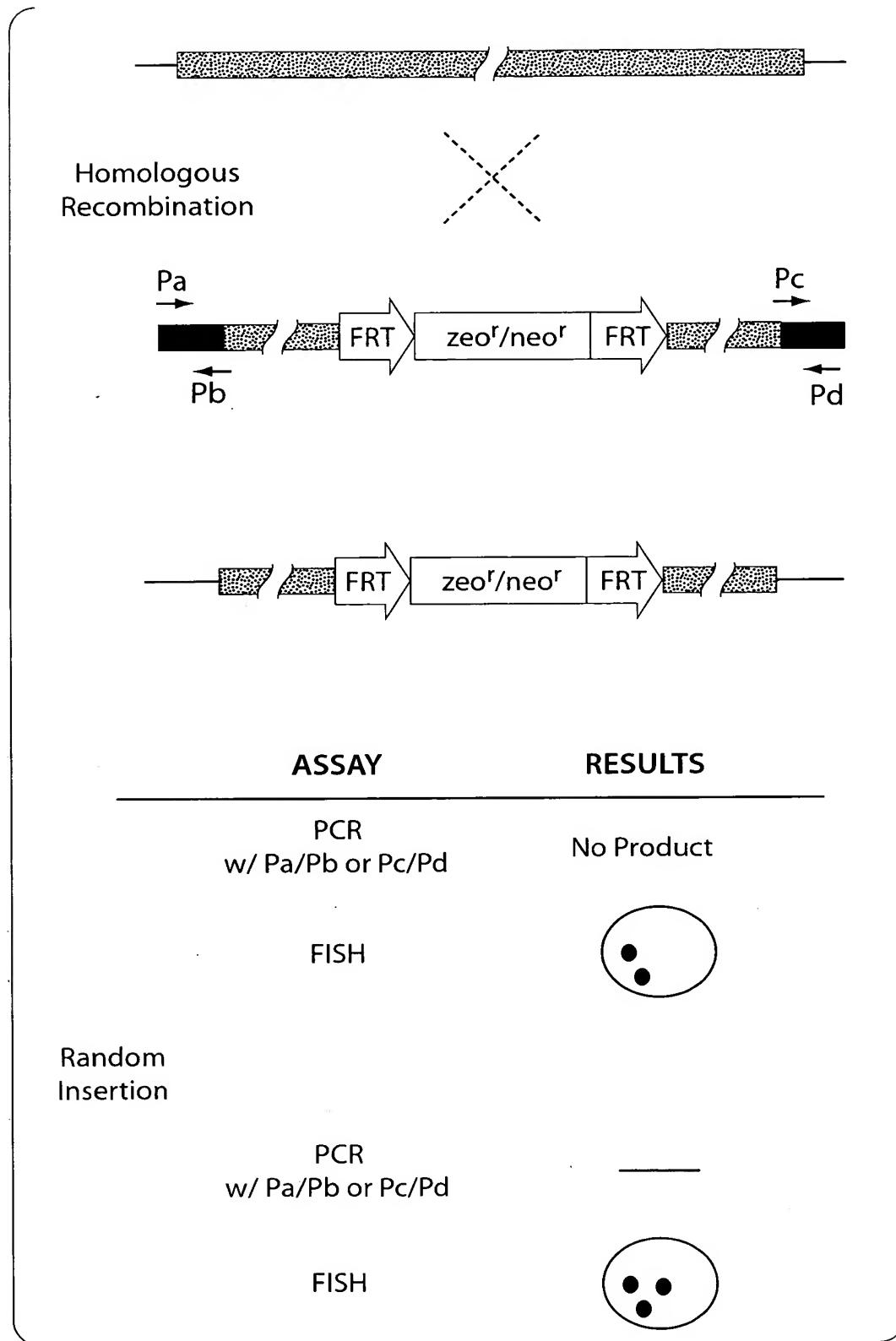
Southern Blotting

— WT

**Fig. 4A**

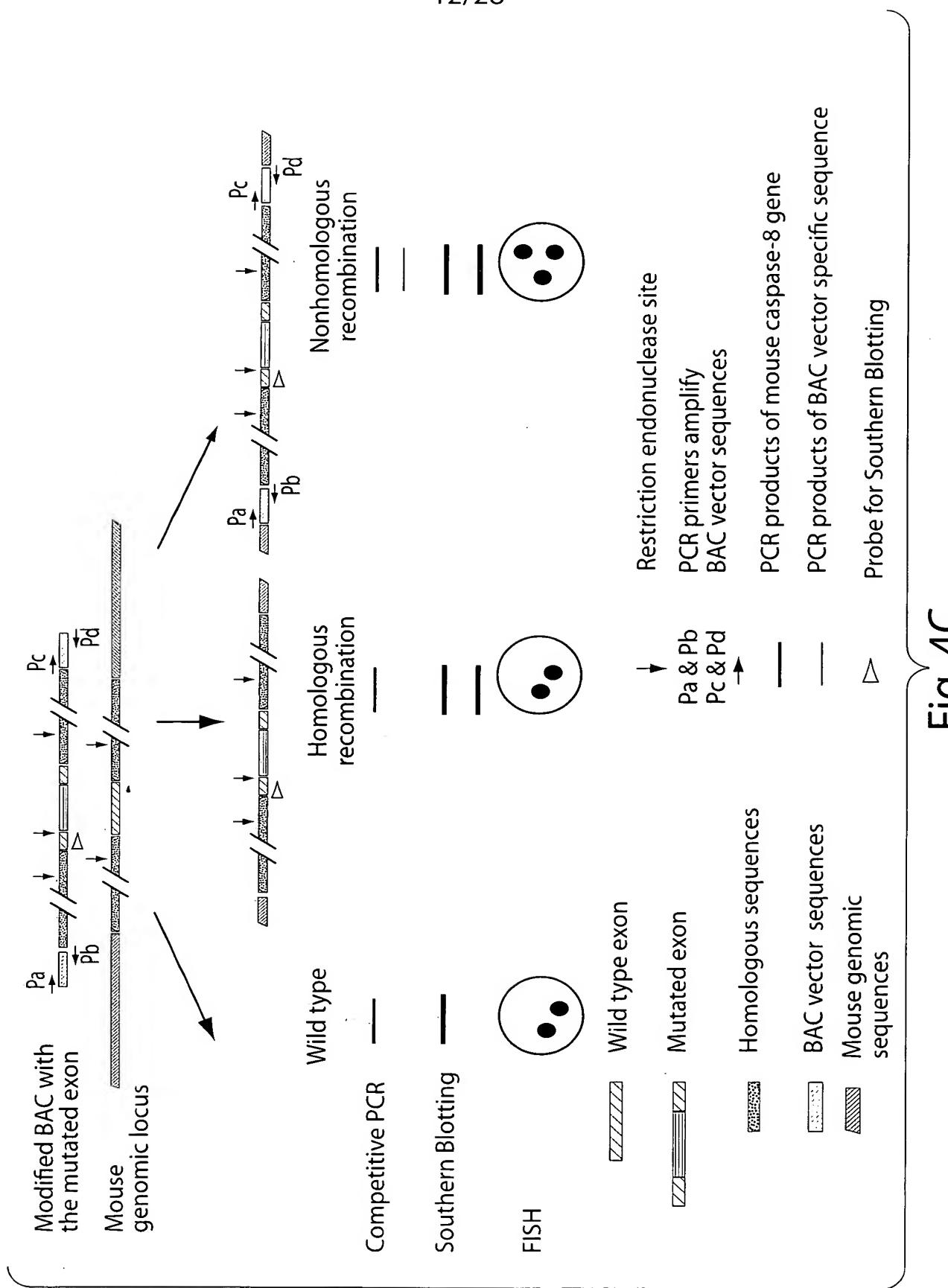
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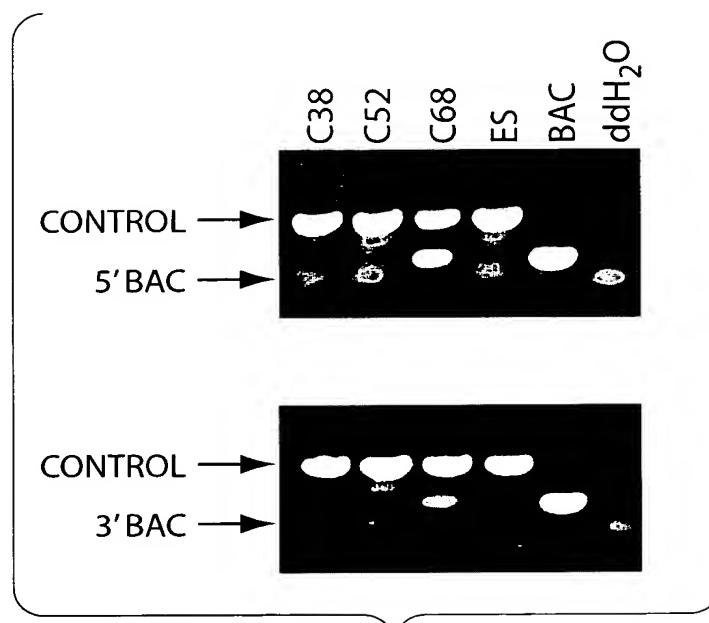


Fig. 5A

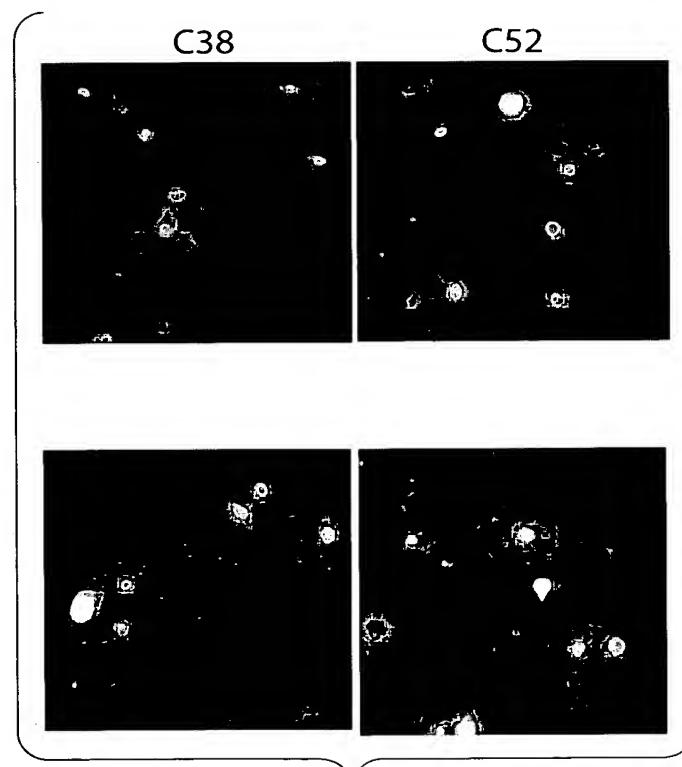


Fig. 5B

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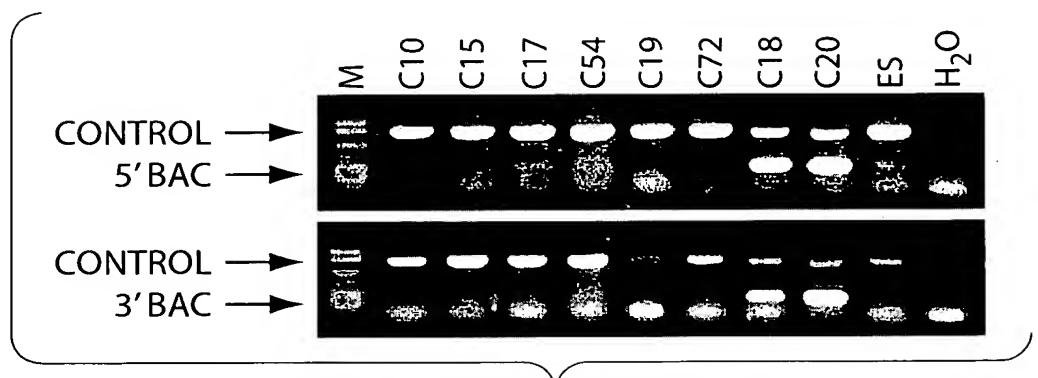


Fig. 6A

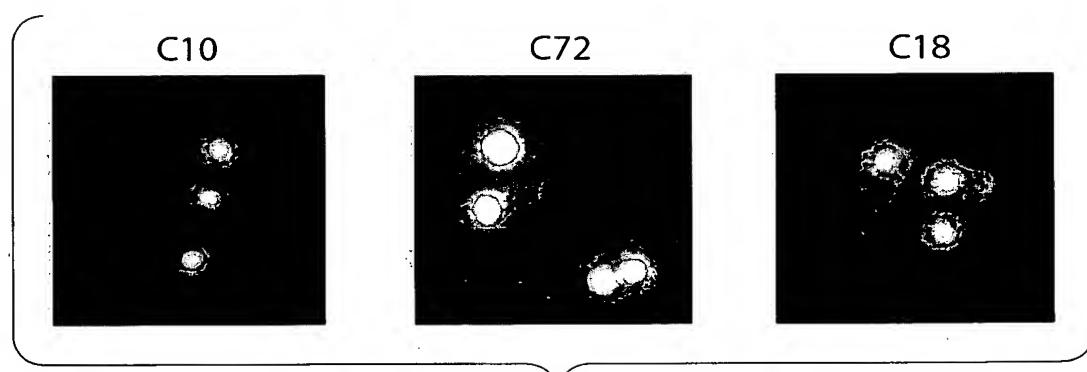


Fig. 6B

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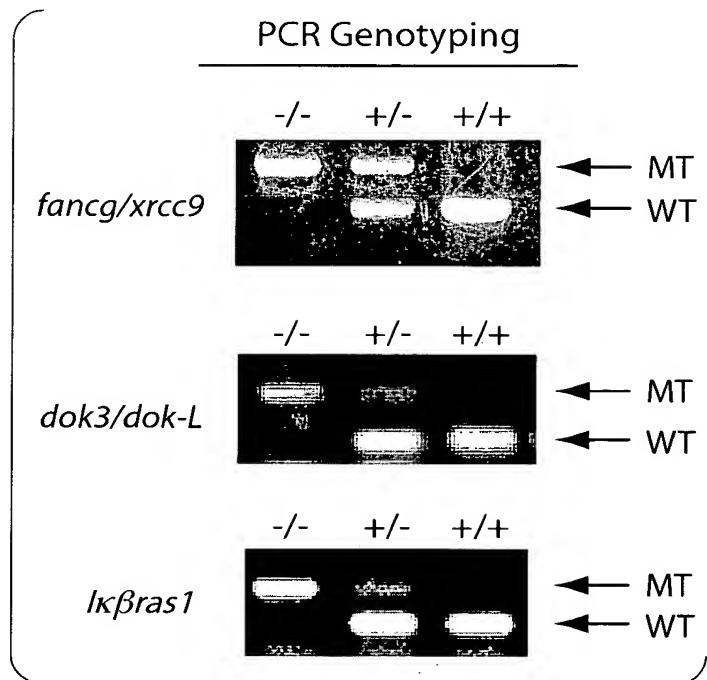


Fig. 7A

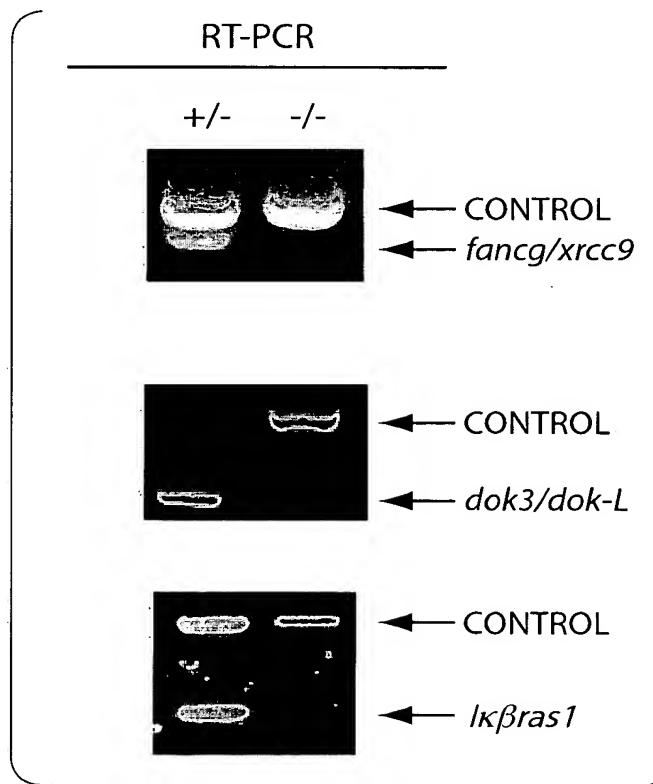
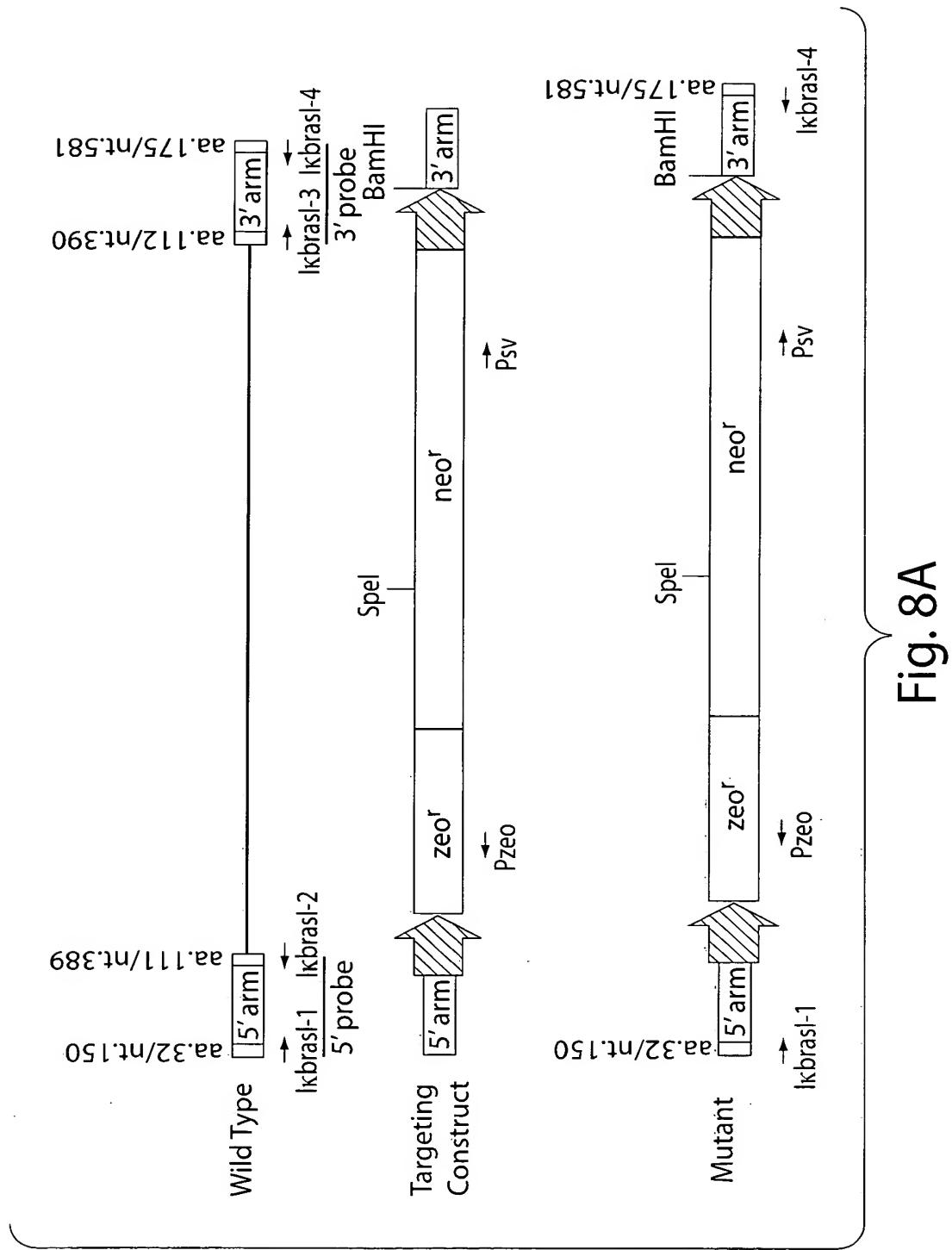


Fig. 7B

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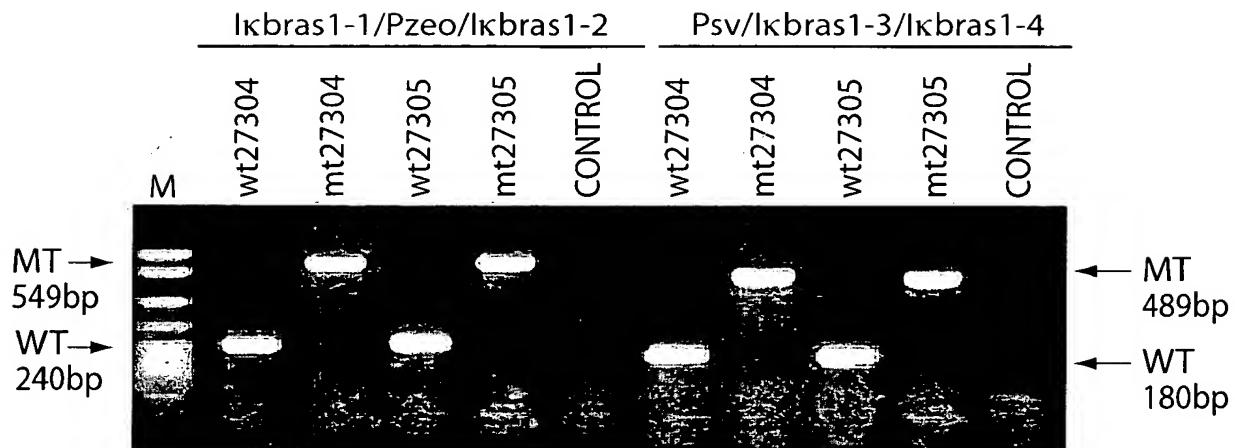


Fig. 8B

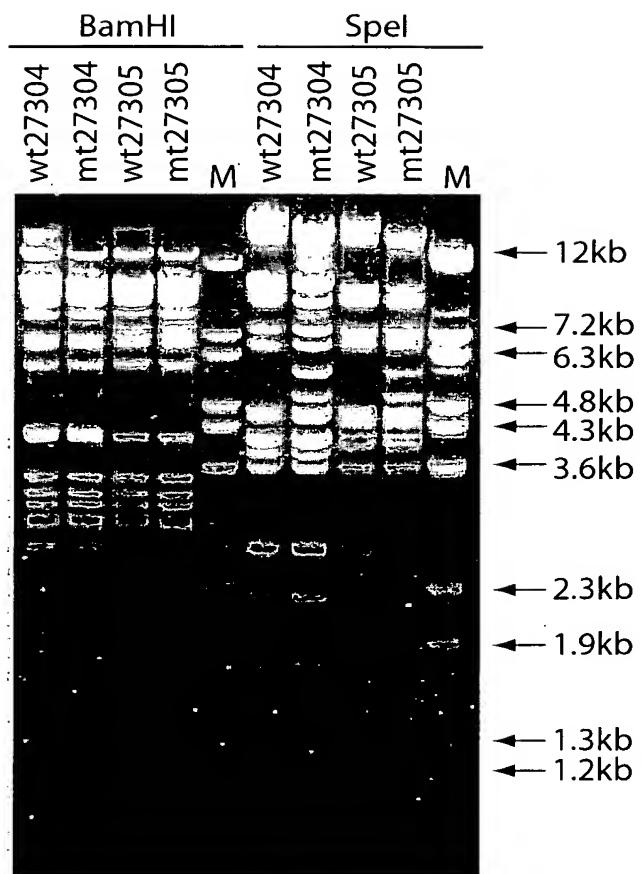
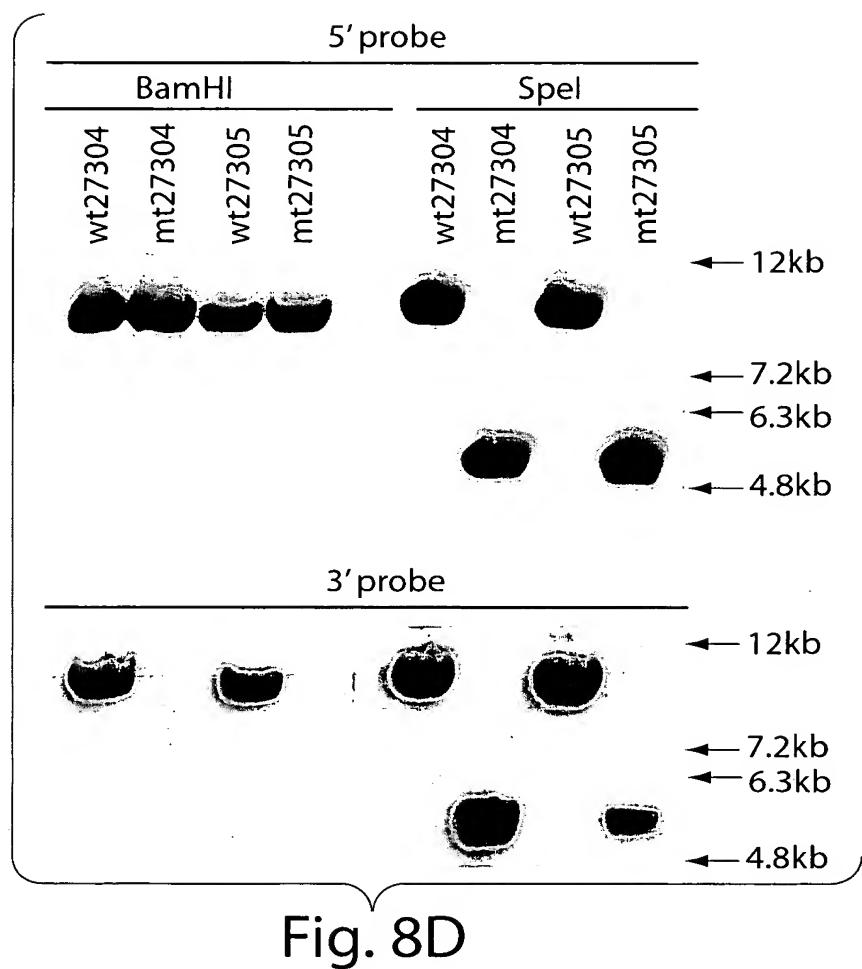


Fig. 8C

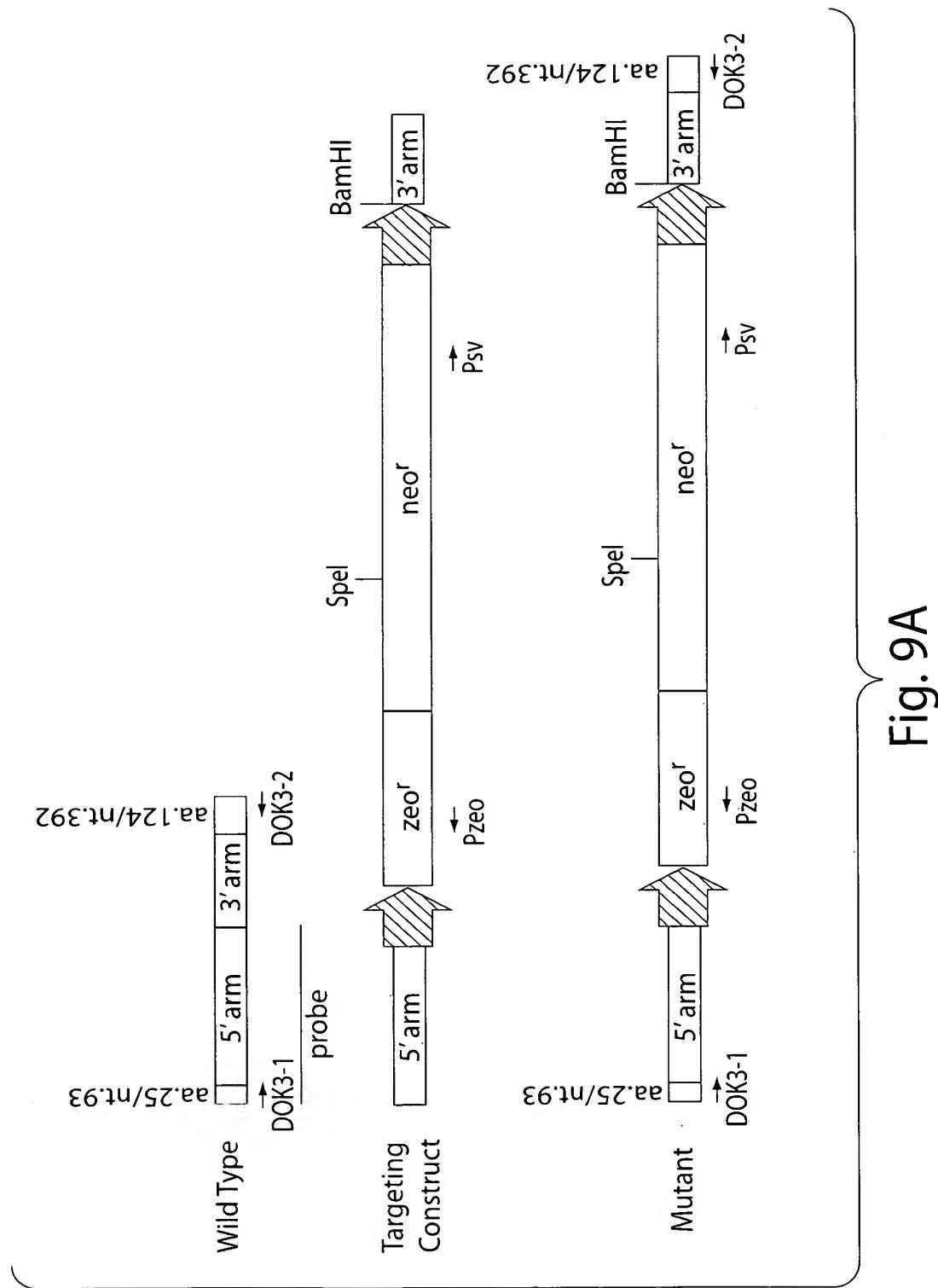
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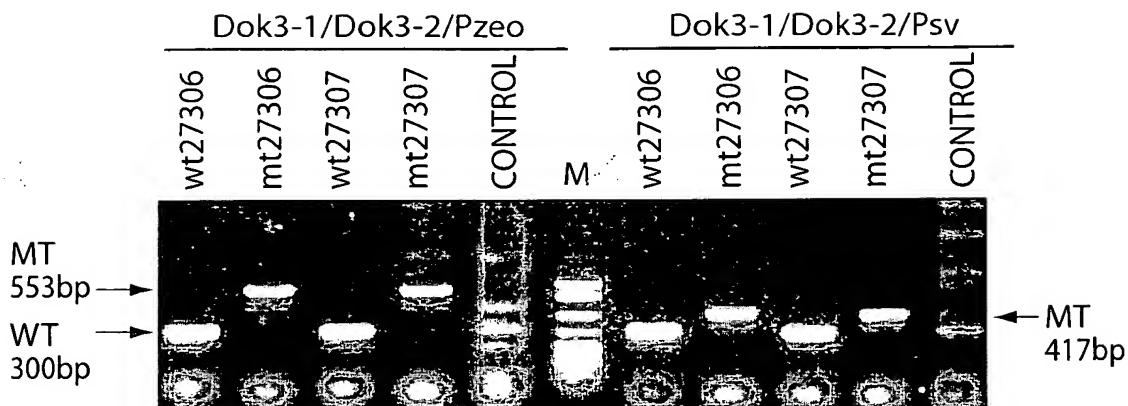


Fig. 9B

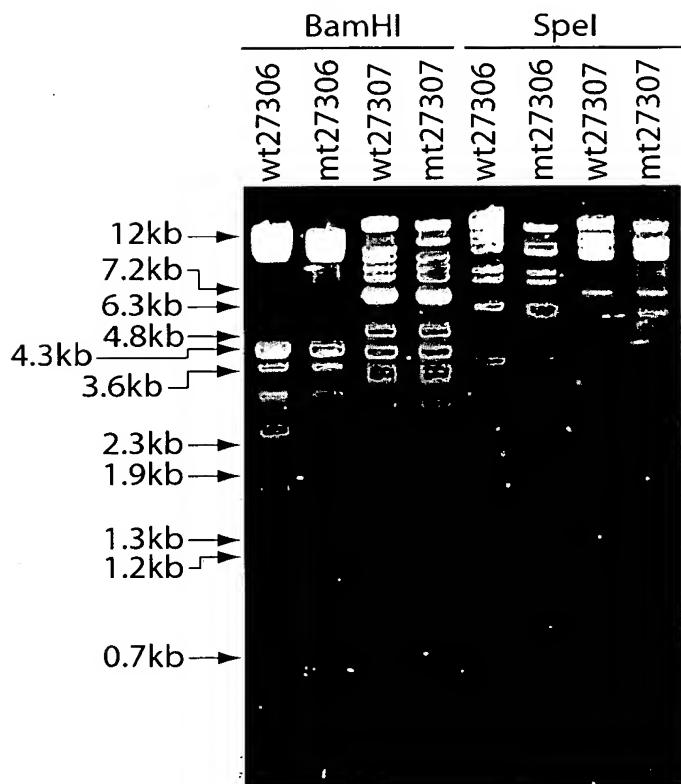


Fig. 9C

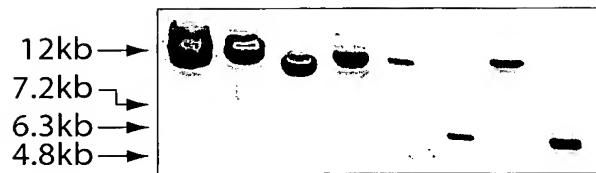


Fig. 9D

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<b>Gene/Clone</b>	<b>5'arm (nt)</b>	<b>3'arm (nt)</b>	<b>Deletion (nt)</b>	<b>Efficiency*</b>
<i>fancg/xrcc9</i>	480	260	4900	100%
<i>Iκβras1 #1</i>	185	138	unknown	30%
<i>Iκβras1 #2</i>	185	138	unknown	25%
<i>tab2.#1</i>	213	340	869	30%
<i>tab2.#2</i>	213	340	869	50%
<i>pag.#1</i>	105	373	no	100%
<i>pag.#2</i>	105	373	no	58%
<i>pag.#3</i>	105	373	no	100%
<i>dok3/dok-L#1</i>	188	93	no	42%
<i>dok3/dok-L#2</i>	188	93	no	30%
<i>bruce</i>	50	50	no	100%

\*The efficiency was calculated based on nested PCR screening of 24 ampicillin and chloramphenicol double resistant colonies at the 3' integration site.

**Fig. 10**

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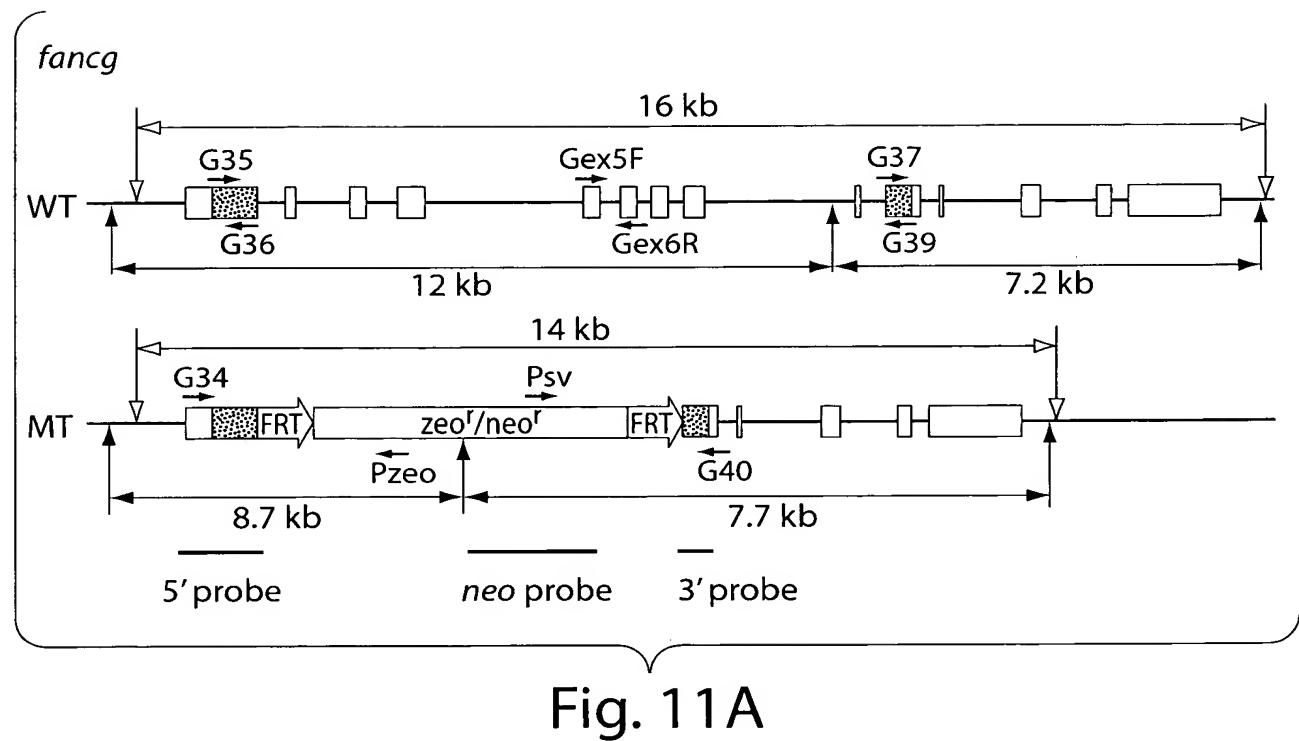


Fig. 11A

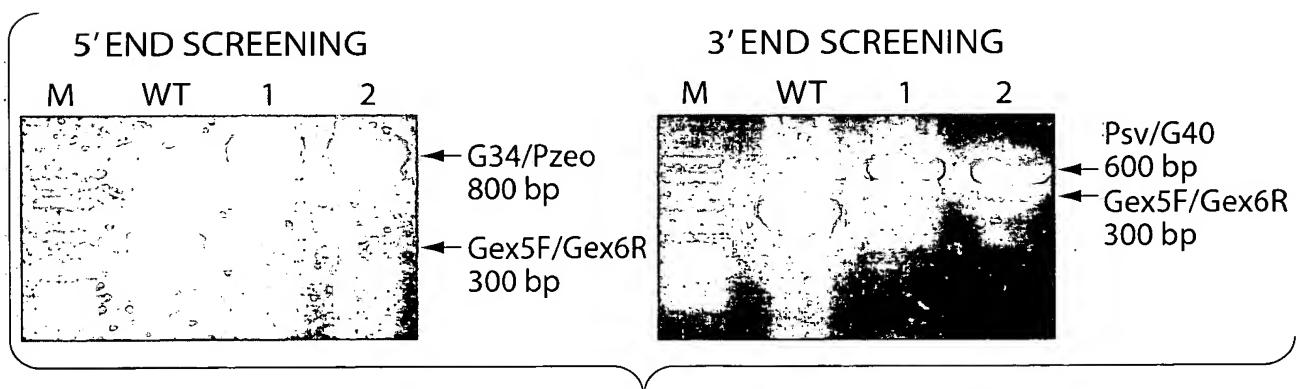


Fig. 11B

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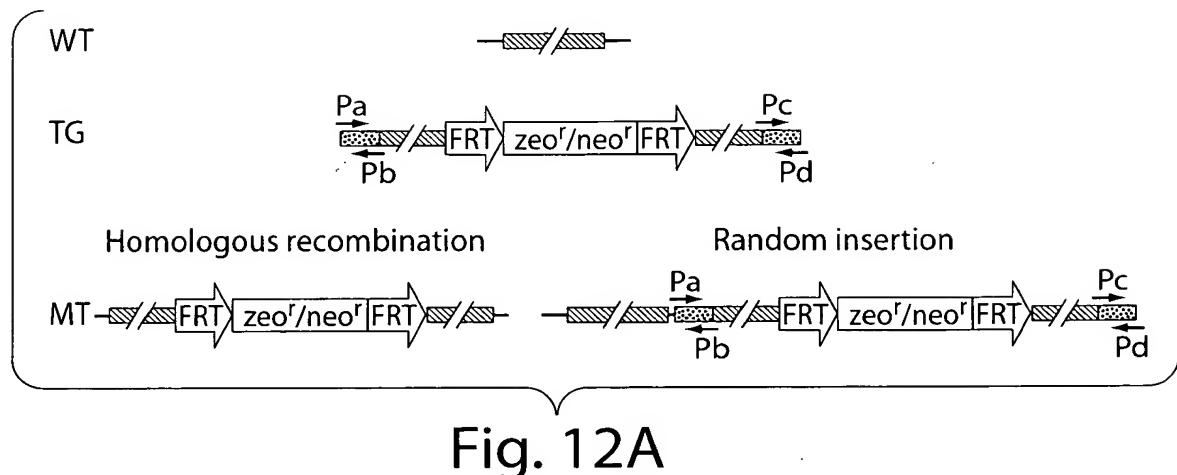


Fig. 12A

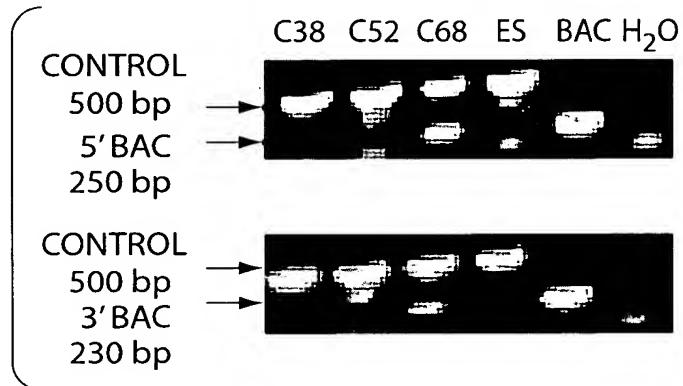


Fig. 12B

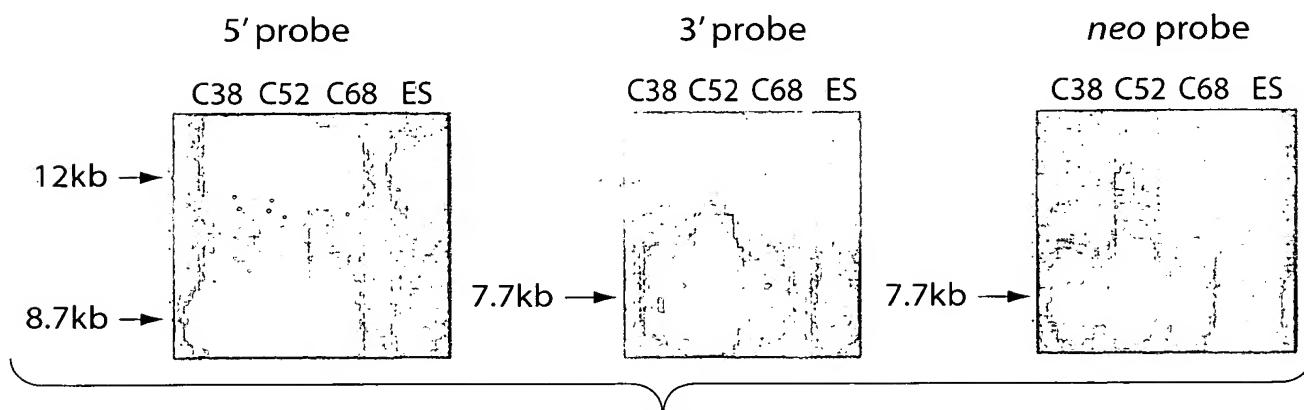


Fig. 12C

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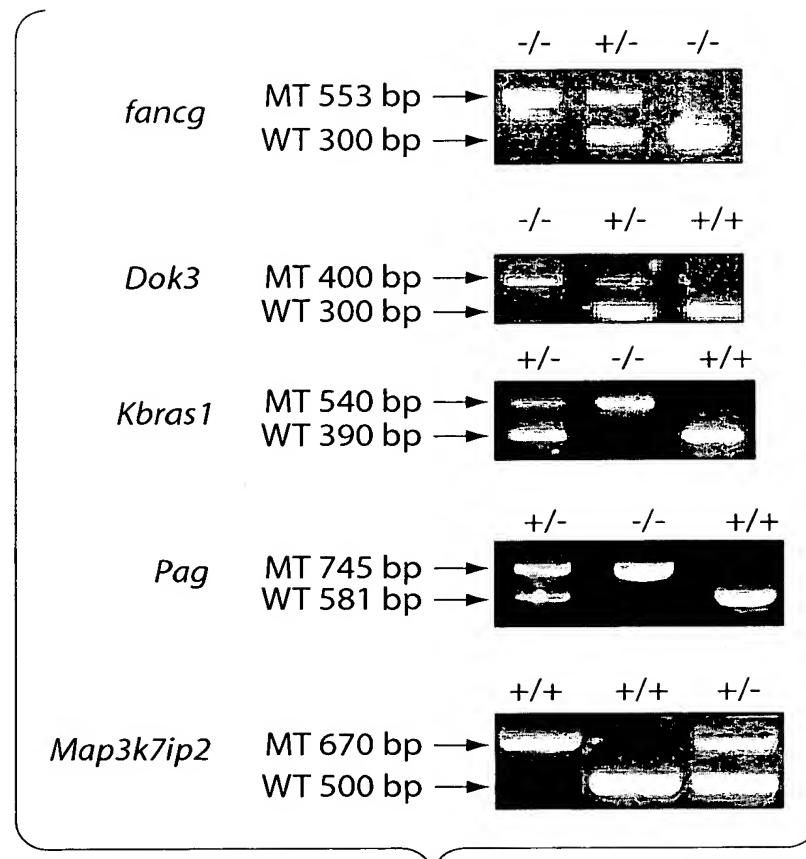


Fig. 13A

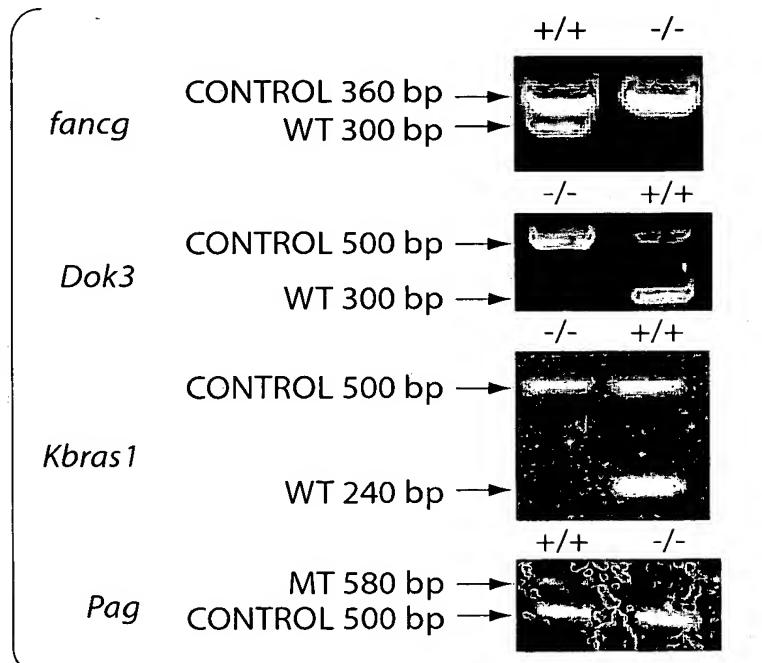


Fig. 13B

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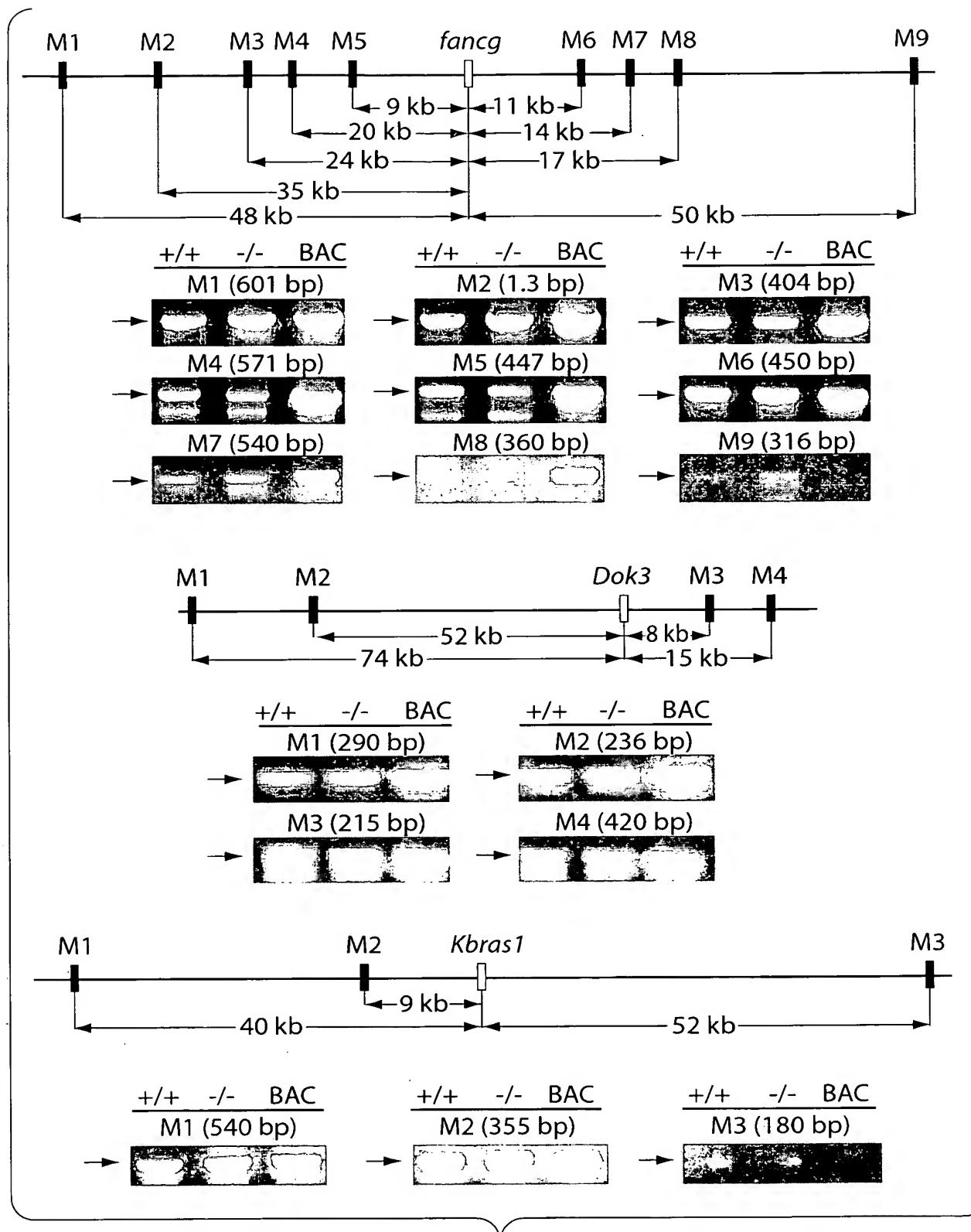


Fig. 13C

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Gene	PCR screening/96 colonies				FISH screening			Effective targeting efficiency <sup>c</sup>	
	no signal <sup>a</sup>	5' BAC	3' BAC	5' & 3' BAC	no BAC signal <sup>b</sup>	colonies screened	2 spots	3 spots	
<i>FANCG/XRCC9</i>	36	4	6	28	22 (37%)	4	3 (75%)	1	28%
<i>IkB RASJ</i>	1	16	12	15	52 (55%)	27	6 (22%)	21	12%
<i>CBP/PAG</i>	6	10	5	32	43 (48%)	16	7 (44%)	9	21%
<i>DOK3/DOK-L</i>	6	12	9	55	14 (16%)	11	5 (45%)	6	7%
<i>TAB2</i>	16	8	16	27	29 (36%)	10	2 (20%)	8	7%

a. A high PCR failure rate (internal control negative) was seen with *FANCG/XRCC9* prior to the introduction of improved protocols.

b. Percentage calculation denominator excludes PCR failures.

c. The percentage with no vector signal multiplied by the percentage with two FISH spots.

Fig. 14

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Psv/cask3/cask4

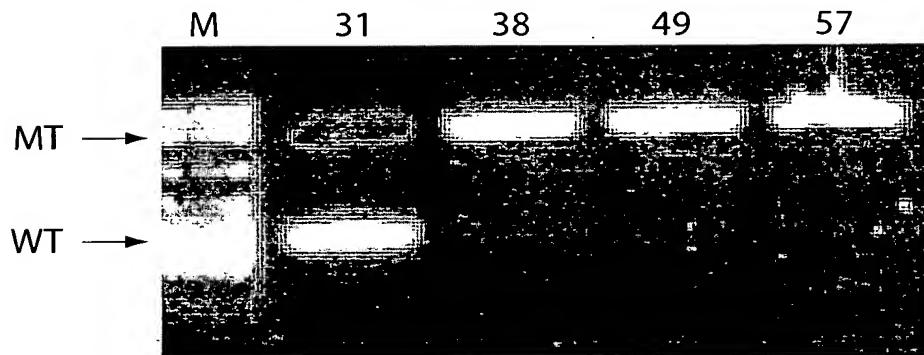


Fig. 15

Pzeo/maguin-3/maguin-4

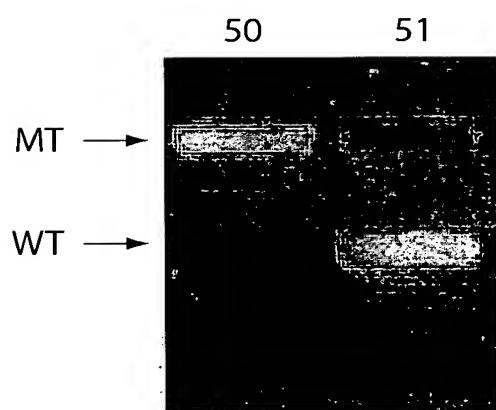


Fig. 16

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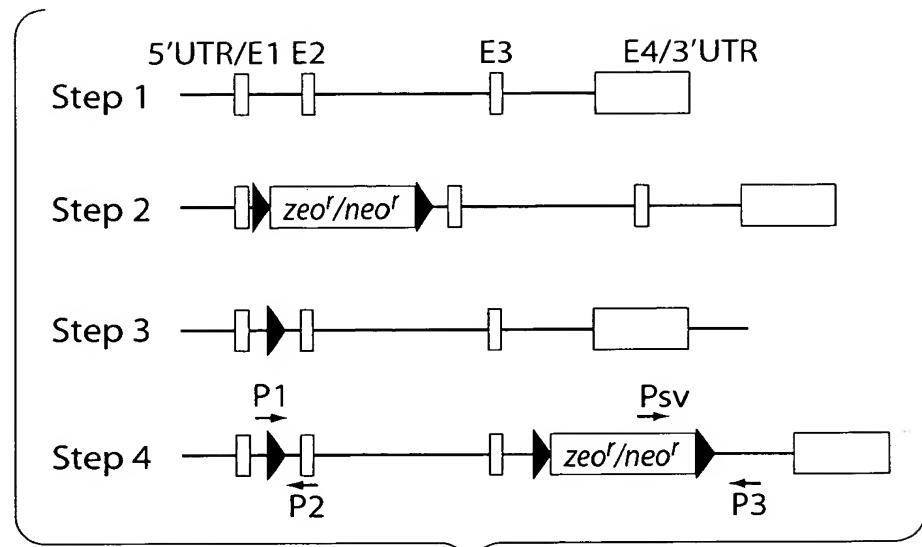


Fig. 17A

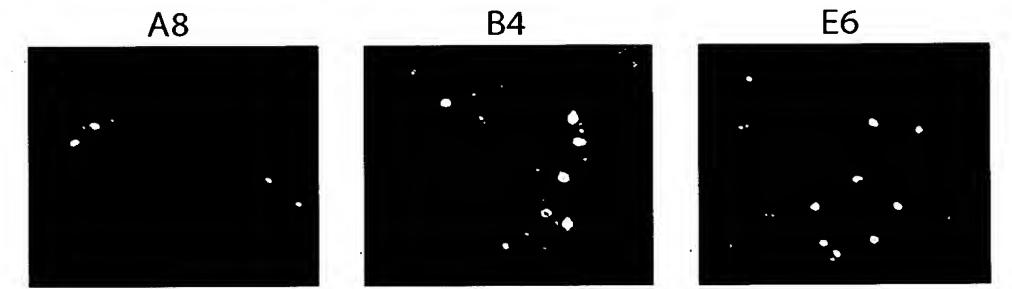


Fig. 17B

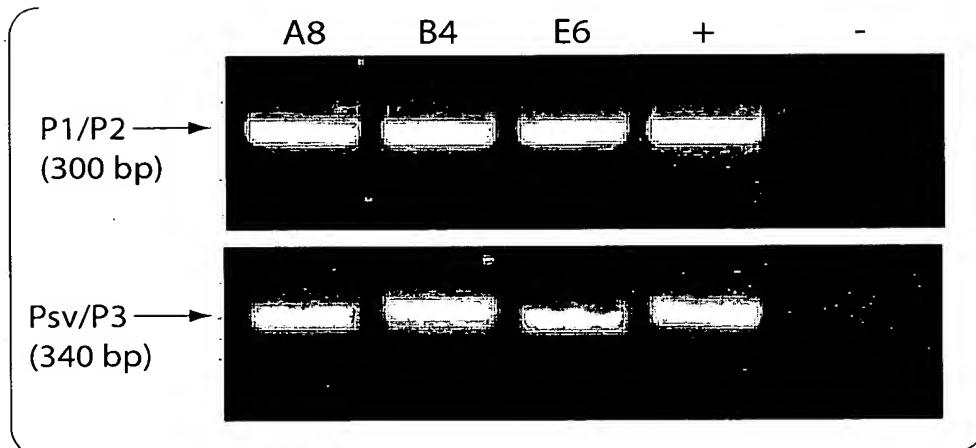


Fig. 17C